

PATENT ABSTRACTS OF JAPAN

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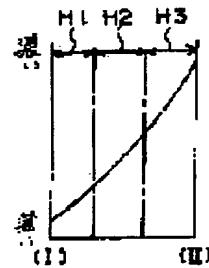
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(54) FILTER MEDIUM FOR AIR CLEANER AND AIR CLEANER

(57)Abstract:

PURPOSE: To prevent the clogging due to the mixing of dust and oil content and also to improve the air blow cleaning capacity.

CONSTITUTION: A filter medium is formed of nonwoven fabric layers where the upper layer on the air inflow side located on one end part side in the layer thickness direction, the lower layer on the air outflow side located on the other end side in the layer thickness direction and the intermediate layer sandwiched between the upper and lower layers are laminated. An oil-repellent agent or oil-repellent fiber is contained in the whole filter medium so that the density is gradually increased from the upper layer towards the intermediate and lower layer (from the location (I) of one end surface on the air inflow side in the filter medium layer thickness direction toward the location (II) of the other end surface on the air outflow side). And the filter medium is of density gradient type where free volume is decreased from the upper layer towards the lower layer. The oil content, such as white smoke is more adsorbed on the upper layer (coarse layer) on the air inflow side of the filter medium. Fine dust, such as carbon passes through the upper layer (coarse layer) on the air inflow side of the filter medium and is more captured in the lower layer (dense layer) on the air outflow side of the filter medium. Consequently the oil content and dust are extremely seldom mixed.



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